

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL SCIENCE CENTER 701 MAPES ROAD FORT MEADE, MD 20755-5350

DATE : December 7, 2000

SUBJECT: Region III Data QA Review

FROM : Fredrick Foreman

Region III ESAT RPO (3ES20)

TO : Michael Towle

Regional Program Manager (3HS21)

Attached is the organic data validation report for the 12th Street Landfill site (Case#: 28689, SDG#: C02Q7) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

The format of this validation report has changed. It will no longer include copies of the CLP forms. This change was driven in part by a need to reduce the amount of paper utilized. I will continue to retain copies of the CLP forms and they will be available upon request.

If you have any questions regarding this review, please call me at (410) 305-2629.

Attachment

cc: (b) (4) (Tetra Tech EMI)

WA File: 0300402 TDF# 1141

OFFICE OF ANAYTICAL SERVICES AND QUALITY ASSURANCE

Lockheed Martin Environmental Services
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597



DATE:

December 4, 2000

SUBJECT:

Level M1 Organic Data Validation for Case 28689

SDG: C02Q7

Site: 12th Street Landfill

FROM:

(b) (4)

Senior Data Reviewer

(b) (4)
Senior Oversight Chemist

TO:

Fredrick Foreman

ESAT Regional Project Officer

OVERVIEW

Case 28689, Sample Delivery Group (SDG) C02Q7, consisted of one (1) soil sample submitted to Mitkem Corporation (MITKEM) for volatile, semivolatile and pesticide/PCB analyses. No field blanks were included in sample set. Sample was analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) OLM04.2 through Routine Analysis Services (RAS) program.

SUMMARY

Data were validated according to Innovative Approaches for Validation of Organic Data, Level M1, which includes the evaluation of action limits, laboratory and field blanks, sample paperwork, retention times, mass spectra, and chromatograms. Level M1 review excludes evaluation of quality control forms, calibration, and raw data. Although not required by M1 review, the reviewer observed three (3) Minor Problems during the assessment of data quality. Data were qualified accordingly, based on Region 3 guidelines. All samples were successfully analyzed for all target compounds.

Samples C02Q7 reported positive results for Aroclor 1260. In pesticide/PCB analyses, where multicomponent compounds are present, false positives for single component compounds are common. Caution should be exercised in interpreting positive pesticide results in this sample.

MINOR PROBLEMS

Volatile sample C02Q7 reported area counts for internal standard chlorobenzene-d5 outside
lower Quality Control (QC) limit. Results were confirmed as matrix effect by similar results
reported in Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample. Positive
results associated with this standard were qualified "J". Quantitation limits were qualified
"UJ" on Data Summary Form (DSF).

- Semivolatile sample C02Q7 reported area counts for internal standards chrysene-d12 and perylene-d12 outside upper Quality Control (QC) limits. Results were confirmed as matrix effect by similar results reported in diluted analysis and MS/MSD analyses of sample. Positive results associated with these standards were qualified "J". Quantitation limits were qualified "UJ" on Data Summary Form (DSF).
- Pesticide/PCB data were qualified "J" when percent difference (%D) between results detected on two columns exceeded the twenty-five percent (25%) criterion.

NOTES

• The maximum concentrations of all target compounds found in the analyses of method and storage blanks are listed below. Samples with concentrations of common laboratory contaminants less than ten times (<10X) highest blank concentration or with concentrations of other contaminants less than five times (<5X) blank concentration have been qualified "B".

Compound	Concentrat	<u>ion</u>
dichlorodifluoromethane	2	J
acetone *	. 3	J
2-butanone *	1	J
chloroform	2	J
4-methyl-2-pentanone	1	J
2-hexanone	2	J
1,3-dichlorobenzene	1	J
1,4-dichlorobenzene	1	J
1,2-dichlorobenzene	1	J
1,2,4-trichlorobenzene	3	J
bis(2-ethylhexyl)phthalate *	36	J

^{*} common laboratory contaminant

- Semivolatile sample C02Q7 was reanalyzed at sixteen fold (16X) dilution to quantitate common laboratory contaminant bis(2-ethylhexyl)phthalate. Results from diluted analysis were reported for this compound on DSF and identified with "+" symbol.
- Compounds detected below Contract Required Quantitation Limits (CRQLs) were qualified "J" on DSFs.
- Volatile sample mass other than five (5) grams were extracted by laboratory. The dilution factor reported on DSF for sample C02Q7 was adjusted to reflect actual sample mass used for analysis.
- Laboratory case narrative identifies spike compound recovery outliers in volatile and semivolatile QC analyses and a surrogate recovery outlier in semivolatile MS analysis. Level M1 review excludes evaluation of quality control analysis results.

All data for Case 28689, SDG C02Q7, were reviewed in accordance with Innovative Approaches for Validation of Organic Data, Region III, June 1995.

ATTACHMENTS

1)	Appendix A	Glossary of Data Qualifier Terms
2)	Appendix B	Data Summary Forms
3)	Appendix C	Chain of Custody Records
4)	Appendix D	Laboratory Case Narrative

DCN: 28689rpt

Appendix A

Glossary of Data Qualifiers

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GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

- B = Not detected substantially above the level reported in laboratory or field blanks.
- R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
- N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

<u>CODES RELATED TO QUANTITATION</u> (can be used for both positive results and sample

quantitation limits):

- J = Analyte present. Reported value may not be accurate or precise.
- K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.
- UL = Not detected, quantitation limit is probably higher.

OTHER CODES

- NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
- Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: VOLATILES

Case #: 28689

SDG: C02Q7

Site:

12TH STREET LANDFILL

Lab.:

MITKEM

Number of Soil Samples: 1 Number of Water Samples: 0

Sample Number :		C02Q7									
Sampling Location :		S-1				i					
Field QC:											
Matrix :		Soil				İ					
Units:		ug/Kg				ì					
Date Sampled :		11/6/00								ł	
Time Sampled :		10:20									·
%Moisture:		35									
pH:		7									
Dilution Factor :		0.98									
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10										
Chloromethane	10	COMBON SPECIFICAN	- ALLEY PROPERTY.	intermed Section	535-4500-3	SHEELESS LADER SETTE	i Temperata		menonda.	District the second second second	oppronauce
Vinyl Chloride	10.										
Bromomethane Chloroethane	10									Service and the contract of	19900005
Trichlorofluoromethane	10										
1,1-Dichloroethene	10 10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10	HERIOSPALIE HILL HALLE FO									
Acelone	10	57									
Carbon Disulfide	10	100945569905 2 5.0000	Salastanah sala	marzonichicopii, 1295	HEARTER'S	CHOUSE IN SHEELINGS					Mile E. S. M.
Methyl Acetate	10										
Methylene Chloride	10	. milana area esperiente esperiente es	Activities	Man har mile appropriate con-	in same a pro-	HOLLOT TELLETS THE SECTION	annumatri, ,	White are a selection			Spatistic Section
trans-1,2-Dichloroethene	10										
Methyl tert-Butyl Ether	10							- man			
1,1-Dichloroethane	10										ling.
cis-1,2-Dichloroethene	10						l				
2-Butanone	10 ⋅	16				Maria de Pa					#
Chloroform	10	2	B		r Parinationa	ggyrang .onja	Bulki Tisebi	рука, ученуу, тош	Shining a m	eggerny a n-care-	
1.1,1-Trichloroethane	10			Red Gright		Personal de la companya dela companya dela companya dela companya de la companya dela companya de la companya dela companya dela companya de la companya de la companya de la companya dela companya de la companya de la companya dela c				lita in 1919	p 1
Cyclohexane	10) 185. 724	96000 i Nighter (200	STANKE.	h istoorestor	Tiidas: NP	Hillian Hillian State T	B) - 14-1
Carbon Tetrachloride Benzene	10										
1,2-Dichloroethane	10 10 -	2	J					SAEZHE ZERO			
Trichloroethene	10										
Methylcyclohexane	10 			Con Book a Police		Santaga.				al,	
1,2-Dichloropropane	10		da halfini.	HESTAGE ELISTS.	ghethay:						idPiculti**
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10	AND SHARE THE SECTION SECTION		C. Min The Brand Transfel.	Talida Halling	ബി ക്ക് പുടിപ്പിക്ക് 14	inche en Indi	Managar 1993 Alianna	.ndaraPilili	Mandellijnos: (AV)\$TY	udhada Ti
4-Methyl-2-pentanone	10		້ບໍ່ມີ								19:50
Toluene	10	And tenden motories of	UJ		[· ·			and the second second second second			
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10				1	L		<u> </u>			
Tetrachloroethene	10	31			Mark.						ha.H

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

DATA SUMMARY FORM: VOLATILES

Page _2___ of _5__

Case #: 28689

SDG: C02Q7

Site:

12TH STREET LANDFILL

Lab.:

MITKEM

Number of Soil Samples: 1 Number of Water Samples: 0

Sample Number :		C02Q7									
Sampling Location :	S-1										
Field QC:	1					•]				
Matrix :		Soil]							
Units:		ug/Kg									
Date Sampled :		11/6/00		1	•			•			
Time Sampled:		10:20]				•			
%Moisture:		35		Ì							
pH:		7						,			
Dilution Factor :		0.98									
Volatile Compound	CRQL	Result	Flag	Result	Fiag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10		ັບປ				MA.				F.
Dibromochloromethane	10		UJ								
1,2-Dibromoethane	10		เบ้ม								
Chlorobenzene	10	1	IJ				1	ł			
Ethylbenzene	10:		UJ.								
Xylenes (total) Styrene	10		IJ					,			
Styrene	10		ບມ								
Bromoform	10		***************************************			OPTIALIZZACIONE CONTRACTO POST	egipatnan na sa	NATE: 111111111111111111111111111111111111			
Isopropylbenzene	10	24	J						#10	**	
1,1,2,2-Tetrachloroethane	10		IJ		A Second Second Street						
1,3-Dichlorobenzene	10		ູ້ເປັນ					3F			
1,4-Dichlorobenzene	10	April 1 of a bibliod a bibliod a bibliod and a bibliod and a bibliod a bibli	UJ		ļ						
1,2-Dichlorobenzene	10		ຼເມ								
1,2-Dibromo-3-chloropropane	10	•	υJ				.				
1,2,4-Trichlorobenzene	10		เบม								

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

DATA SUMMARY FORM: BNA

Page _3__ of _5__

Case #: 28689

SDG: C02Q7

12TH STREET LANDFILL

Site : Lab. :

MITKEM

Number of Soil Samples: 0 Number of Water Samples: 0

Sample Number :	C02Q7									
Sampling Location :	S-1									
Field QC:									i	
Matrix:	Soil								İ	
Units:	ug/Kg		•							
Date Sampled :	11/6/00									
Time Sampled :	10:20									
%Moisture:	35									
pH:	7.4									
Dilution Factor :	1.0 / 16.0									
Semivolatile Compound CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde 330	73	J								
Phenol 330		isang mag			**************************************		FOR SIME SHEET PETER DALES.	ų.	Paratura en presidenta da la des	l sources and
bis-(2-Chloroethyl) ether 330								XI 111		
2-Chlorophenol 330 2-Methylphenol 330					NEUFARKET (ACTE)		PAGE CHILDREN (CO.) FA			JPGEL I
2,2'-oxybis(1-Chloropropane) 330										
Acetophenone 330	100		White in 1	FG MI						
4-Methylphenol 330		in Mendico I	Alinemie a 1911 (14)	linit dutini L	Markey Company	HELPEL-L-	ENTERNASE TO LA CO	HINTEN, NA	White is 1996 and	dela des
N-Nitroso-di-n-propylamine 330										
Hexachloroethane 330	t ittimisee ta galanik kel Almesee (and herealt	MELITAR COMMINSTRA	(35 F. z. a03.)	PARIOTAL OF DAIL AND AND AN	CHORGE LABOR		, aastannis	Schreitstrachsundi	Riidenieus
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2-Nitrophenal 330										
2,4-Dimethylphenol 330										
bis(2-Chloroethoxy)methane 330				143						
2,4-Dichlorophenol 330	Anthebortes / tak to to W	ramainer, busis	Charles to Bedeate	adec. a ree	Table 1975 - 1975 - 1	Official Control	Superior Manager Control	.	**************************************	
Naphthalene 330	. 69	V					ESTIT			5 -
4-Chloroaniline 330	HILLIANSA PROSECTIVA V	PREMIECE :	St. of Physics	ja 5	eri v Herris	ache e ve	Brand year ou list	Berner with	Baltistationnes (* 14.	i4 ,
Hexachlorobutadiene 330				LL Jak						r jihar
Caprolactam 330	5557963524.3um		Meta skuar si		i Idang-Br	Water Let	Daddyladed Tagy	G.M. init	Defectoración de	Bot Sew
4-Chloro-3-methylphenol 330 2-Methylnaphthalene 330	160								Belfiner	
2-Methylnaphthalene 330 Hexachlorocyclopentadiene 330	100	j Tomer				KOPED:				Here. 9
2,4,6-Trichlorophenol 330										EF-14
2.4,5-Trichlorophenol 830						The C				
1,1'-Biphenyl 330	110	J	SHEMMETERME (*32*)	enember				Handa A	Mariipateli, 1,16	ESTOR
2-Chloronaphthalene 330					ere valsy. G-10e10e16e					MIL.
2-Nitroaniline 830	and the second second second	Allenouss.	RESCAL SELECTION		ware tector 11.22.250	est ' until'		D ((())) ((44))	1990 (1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 -	No. 4
Dimethylphthalate 330	73	IJĘ,:	# # F	Strat Data				INT.		
2,6-Dinitrotoluene 330										
Acenaphthylene 330	Sulding the Control of the Control o					Ķi.		M.		Br. T
3-Nitroaniline 830							<u> </u>			

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Case #: 28689

SDG: C02Q7

12TH STREET LANDFILL

Site : Lab. :

MITKEM

Number of Soil Samples: 0 Number of Water Samples: 0

Sample Number: C02Q7 Sampling Location: S-1 Field QC: Matrix: Soil Units: ug/Kg Date Sampled: 11/6/00 Time Sampled: 10:20 %Moisture: 35 ρΗ・

pH:		7.4				l					
Dilution Factor:		1.0 / 16.0				<u> </u>	_				
Semivolatile Compound CF	RQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene 3	30			Ethan	gy i rese.		E-15			The Street of the Street	F 1
	30										
4-Nitrophenol 8	30				14.7						ji.
Dibenzofuran 3	30	71	j	,						allager g	4.
2,4-Dinitrotoluene	30				English	Marien			rece Mara e		
Diethylphthalate 3:	30									, , , , , , , , , , , , , ,	2
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4-Nitroanline 8	30				武功						
4,6-Dinitro-2-methylphenol 8:	30		nemanana	entil m mallon	ana ana an	AMERICA MEDICANE DE LA COLONARIO		THE PERSON NAMED TO A PARTY AND A	.,		
N-Nitrosodiphenylamine 3	30	210	J								
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Pentachlorophenol 8	30									***************************************	
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Chrysene 3	30	200	J		1			7			

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

330

330

330

330

330

330

330

330

39000 +

120

160

93

100

200

UJ

J

IJ

Revised 09/99

+ results reported from 16X dilution

bis(2-Ethylhexyl)phthalate

Di-n-octylphthalate

Benzo(b)fluoranthene

Benzo(a)pyrene

Benzo(k)fluoranthene

Indeno(1,2,3-cd)pyrene

Dibenzo(a,h)anthracene

Benzo(g,h,i)perylene

Case #: 28689

SDG: C02Q7

12TH STREET LANDFILL

Number of Soil Samples: 0

Site: Lab.:

MITKEM

Number of Water Samples: 0

Sample Number :		C02Q7						<u> </u>	_		_
Sampling Location :		S-1									
Field QC:				İ	,	1					
Matrix:		Soil				ļ				•	
Units:		ug/Kg								ļ	
Date Sampled :		11/6/00				1					
Time Sampled :		10:20		•		1		Į.			
%Moisture:		35									
pH:		7.4									
Dilution Factor :		1.0									
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC											
beta-BHC	1.7	. Englanding spagners	ii dhee ka lee	Times - October 2011	Henri	SDJ - Jahren Care	and a mark to	CRESSED A FILMS TO SECURE	and the same	and and a second	
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alpha-Chiordane	1.7	6.5	J								
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Toxaphene	170										
Aroclor-1016	33			Section 1	51.5.07 .53	antigen and the second and the second		THE COURSE OF TH	<u>. </u>		
Aroclor-1221	67										ţ.
Aroclor-1232	33	recentation desired for the) 	Calingers cars of the	9673	g sagartes i inclas		Assessment of the control of the con		rante et al.	,
Aroclor-1242	33				10.1						i i
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CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Appendix C

Chain of Custody Records

ŞE I	PA	Unite	d States Cont	Environr ract Labo	nental Protect oratory Progra	tion Agency am	& Ch	ain of C	raffic Repo ustody Rec CLP Analysis	cord			13147575	Case N	10. 280	689	<i></i>
Project Code Account Code	5700	3			2. Re	gion No. Sam	poling Co.		4. Date Shippo Airbill Number 4788	ed Carrie	Fed	Ex 374	No.	2001	er in mn A) Surface Wa Ground Wa		7. Preservative (Enter in Column D) 1. HCl 2. HNO3
Site Name 12 +h City, State William		E Sit	e Spill 10	1.	it P	SF PRP ST FED BZ		ong-Term tion RIFS RD RA O&M	1	M	etro (Sent	er Bla 88612	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Leachate Field QC Soil/Sedim PE-water PE-soil Other (spec Column A)	ŀ	 NaHSO4 H2SO4 Ice only CH3OH Other (specify in Column D) N. Not Preserved
CLP Sample Numbers (from labels)	Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preser- vative (from Box 7) Other:	TA	E RAS Analysis TA (circle one) PR* 7 4 21 BNA	TΔ	Track	F nal Specific ing Number g Numbers	7	G Station ocation entifier	Yea Sa	H o/Day/ ar/Time ample flection	Correspo CLP Ino Sample	rganic	Sampler Initials	K Field QC Qualifier 8 = 8tank S = Field Spik D = Field Duplicate R = Rinsate PE = Perform Eval
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Shipment for C Complete?	N)	Pag of	1-	BNA MS/M Pest/PCB N	ISD Required? ISD Required? VISMSD Requir	Y/N Sar ed? Y/N Sar	nple #: nple #:	C (4)	<u> </u>	Addition	al Sampler Si	gnatures		Chain of Cu	istody Sea	Number(s)
*PR provides 7- preliminary resu Relinquished b	y: (Signa	ture)	und in ac inalytical	Da	preliminary reate / Time		y: (Signature	. 	of Custody Relinquis				Date / Tim		eived by: (
Relinquished b	y: (Signa	ture)		Da	ate / Time	<u> </u>	oy: (Signature or Laboratory			hed by: (S	Signature) Remark	s: Is custo	Date / Tin		eived by: (Signature))
Distribution: Blue White	Region Cop	py for Return	n to SMO	Pink - SMi Yellow - Li	O Copy ab Copy for Retu	ــــــــــــــــــــــــــــــــــــــ	· · · · · · · · · · · · · · · · · · ·		<u> </u>	<u> </u>							Standard Instruction Code Definitions

**See Reverse for Purpose Code Definitions
CLASS-99-001

U.S. EPA Region III Sample Scheduling Request Form

S CASE No:-G	TG72 CT694	D			NSF No:						
Date: October 16,	2000 Data Validation I	Level: I			EPA Lab Reply:						
Site Name: 12th S	treet Landfill		Cost:								
Address: 12th Stre	eet at Brandywwine River		City:	Wilmingto	State: DE						
Latitude:		Longi	tude:			Data TAT:2	8 days				
Program: Superfu	nd	CERC	LIS No: DESFN03	05510		Activity: Re	emoval				
Account No: 01T0	3N50102DD330QB00	Op	erable Unit:	·		Spill ID:					
Preparer: (b) (4)		RPM/	PO:Michael Towle	3 H;	531_	Site Leader	(b) (4)				
Phone: 6(b) (4)	0	Phone	: 215-814-3272			Phone: 61	0) (4)				
FAX: 610-485-858		FAX:	215-814-3254			FAX: 610-4	85-8587				
E-mail: (b) (4)	@ttemi.com	E-mai	l: towle.michael@e	pa.gov		E-mail: c	@ttemi.c	.com			
EPA CO: Deboral	ı Eble		Contract Type: START Prime: Tetra Tech I B Eastern Area								
Lab Assignment D	Pate:		Analytical TAT: 14 days				Ship Date From:-10/16/00 //- 06 - 00 Ship Date To: 10/19/00 //- 06 - 00				
Organic Lab:	·						Ship Date To: 10/19/ 00 //				
organic Lab:	, 		· 			Carrier:	-				
SAMPLES	METHOD			PARA	METER			MATRIX			
3	ILM04.1	TAI	L METALS		•			SOIL			
1	ILM04.1	TAI	L METALS & CYA	NIDE		· · · · · · · · · · · · · · · · · · ·		SOIL			
1	OLM04.2	TCI	L ORGANICS					SOIL			
											

NOTE: Data validation levels M3 & IM2 require justification. QC field samples must be included as part of total number of samples.

QO (QC Requirements) As per method.

^{1.} Special Instructions: OSC needs results faxed to him at the above number when they are received at RSCC.

^{2.} Objectives / Project Plan ID / Permit ID: Verify if further cleanup is necessary.

^{3.} Program / Project / Permit Reporting Limits As per method.

Appendix D

Laboratory Case Narratives

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 28689 and SDG# C02Q7. Analyses were performed for one soil sample that was received on November 7, 2000. The analyses were performed under USEPA Contract # 68-W-99-076. Please note that the cooler received was measured at 4°C.

The following samples are submitted in this data package:

Client ID	Lab ID	<u>Analysis</u>
C02Q7	71800001	V, S, P
C02Q7MS	71800002	V, S, P
C02Q7MSD	71800003	V, S, P

V = Volatiles

S = Semivolatiles

P = Pesticides/PCB

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (OLM04.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required.

2. Volatile Analysis:

Trap used for instrument V6: OI Analytical #10 trap containing 8 cm each of Tenax, silica gel and carbon molecular sieve.

GC column used: 30 m x 0.25 mm id (1.4 um film thickness) DB-624 capillary column.

Matrix spike and matrix spike duplicate were performed on C02Q7. Spike recoveries were within the advisory QC limits except for high recovery of toluene in the matrix spike. RPDs were within the advisory QC limits.

Internal standard area count was outside of QC criteria in sample C02Q7. It was also out in the associated matrix spike and matrix spike duplicate.

No other unusual observation was made for the analysis.

3. Semivolatile Analysis:

GC column: 30 m x 0.25 mm id (0.5 um film thickness) DB-5MS capillary column

Matrix spike and matrix spike duplicate were performed on C02Q7. Spike recoveries were within the advisory QC limits except for high recovery of pyrene in the matrix spike. RPDs were within the advisory QC limits.

Internal standard area counts were outside of QC criteria for sample C02Q7. Internal standard area counts were also outside of QC criteria in the associated matrix spike, matrix spike duplicate and the diluted run.

Sample C02Q7 was re-analyzed at dilution to ensure the all target analytes were within the instrument calibration range.

No other unusual observation was made for the analysis.

4. Pesticides/PCB Analysis:

GC column used: 30 m x 0.53 mm id (0.81 um film thickness) DB-608 and 30 m x 0.53 mm id (0.5 um film thickness) DB-1701 megabore columns

Matrix spike and matrix spike duplicate were performed on C02Q7. Spike recoveries and replicate RPDs were within the advisory QC limits.

No unusual observation was made for the analysis.

All of the submittals to the region are originals other than log book pages and copies of tunes and standard files which are shared by many other cases. For these, the original copies are archived in the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-

readable data submitted on diskette has been authorized by the laboratory manager or his designee, as verified by the following signature.

designee, as verified by (b) (4)

CLP Project Manager 11/20/00